

### **Amendments to the Claims:**

*This listing of claims will replace all prior versions, and listings, of claims in the application:*

1. (currently amended) A method for storing data on a magnetic tape by positioning a write head over ~~a moving storage medium~~ the moving magnetic tape and providing a write current to the write head, the method comprising:

detecting a writing error, wherein the writing error is indicated by at least one of a data read back check and write head tracking information;

measuring span of the writing error;

disregarding the writing error when the writing error is indicated by the data read back check and the span of the writing error is less than a first threshold wherein the first threshold is based on the span of the writing error and capability of error correction information to recover mis-recorded data;

suspending the write current in response to the writing error while allowing the ~~storage medium~~ magnetic tape to continue moving when the writing error is indicated by the write head tracking information;

repositioning data that would have been stored during the span of the writing error ~~suspending of the write current~~ when the span of the writing error is greater than the first threshold;

repositioning the magnetic tape when the span of the writing error is greater than a second threshold wherein the second threshold is greater than the first threshold and is based on the span of the writing error and capacity of the magnetic tape; and

supplying write current to store the repositioned data on the storage medium;

selectively supplying the write current to re-write mis-recorded data if write the repositioned data when the span of the writing error is less greater than at least one of the a first threshold and the second threshold wherein the first threshold is based on the span and capability of error correction information to recover the mis-recorded data; and

~~selectively supplying the write current to reposition and re-write the mis-recorded data if the span of the writing error is between the first threshold and a second threshold.~~

2. (currently amended) The method of claim 1 wherein error correction information is encoded in the data on the ~~storage medium~~ magnetic tape and wherein the step of detecting a writing error comprises:

comparing data written to the ~~storage medium~~ magnetic tape to data read from the ~~storage medium~~ magnetic tape to detect errors in the data; and

~~wherein the steps of repositioning data and supplying write current to store the repositioned data are performed if errors in the data exceed a threshold based on capability of the encoded error correction information to recover the data that would have been stored.~~

3. (currently amended) The method of claim 1 wherein error detection and correction information is encoded in the data on the ~~storage medium~~ magnetic tape and wherein the step of detecting a writing error comprises:

reading the error detection information to detect errors in the data; and

wherein the steps of repositioning data and supplying write current to store the repositioned data are performed if errors in the data can not be corrected using the encoded error correction information.

4. (currently amended) The method of claim 1 wherein the step of detecting a writing error comprises:

indicating a writing error based on positioning of the write head relative to the ~~storage medium~~ magnetic tape.

5. (currently amended) The method of claim 4 wherein the step of detecting a writing error comprises:

indicating a writing error based solely on positioning of the write head relative to the ~~storage medium~~ magnetic tape.

6. (currently amended) The method of claim 1 wherein the ~~storage medium~~ magnetic tape includes write head ~~positioning~~ tracking information and wherein the step of detecting a writing error comprises:

indicating a writing error based on the write head ~~positioning~~ tracking information.

7. (canceled)

8. (canceled)

9. (original) The method of claim 1 further comprising:

formatting data for writing by grouping data into sub-blocks, adding sub-block sequencing information, write pass information, and error detection information to each sub-block of the data.

10. (currently amended) The method of claim 1 further comprising distinguishing current data from previously written data stored on the ~~storage medium~~ magnetic tape.

11. (currently amended) A system for storing data on a moving ~~storage medium~~ magnetic tape, the system comprising:

a servo position control for positioning a read/write head relative to the ~~storage medium~~ magnetic tape and providing a tracking signal indicative of read/write head position relative to tracking information on the ~~storage medium~~ magnetic tape; and

a processor for grouping data to be stored on the ~~storage medium~~ magnetic tape, adding write pass information, encoding error correction and detection information in the data, ~~and selectively supplying a write signal to the read/write head to store the data on the storage medium wherein the processor suspends the write signal in response to detection of a writing error while allowing the storage medium to continue moving, and wherein the processor measures span of the writing error and re-writes the data only if the span of the writing error~~

~~is less than a corresponding first threshold based on the span and error correction information, and repositions and re-writes the mis-recorded data if the span of the writing error is between the first threshold and a second threshold detecting a writing error wherein the writing error is indicated by at least one of a data read back check and the write head tracking information, and measuring span of the writing error wherein the processor disregards the writing error when the writing error is indicated by the data read back check and the span of the writing error is less than a first threshold wherein the first threshold is based on the span of the writing error and capability of error correction information to recover mis-recorded data, suspends write current in response to the writing error while allowing the magnetic tape to continue moving when the writing error is indicated by the write head tracking signal relative to the tracking information, repositions data that would have been stored during the span of the writing error when the span of the writing error is greater than the first threshold, repositions the magnetic tape when the span of the writing error is greater than a second threshold wherein the second threshold is greater than the first threshold and is based on the span of the writing error and capacity of the magnetic tape, and supplies the write current to write the repositioned data when the span of the writing error is greater than at least one of the first threshold and the second threshold.~~

12. (currently amended) The system of claim 11 wherein the processor compares data written to the ~~storage medium~~ magnetic tape to data read from the ~~storage medium~~ magnetic tape to detect errors and selectively suspends the write signal if the errors exceed a corresponding threshold based on the error correction information.

13. (currently amended) The system of claim 11 wherein the processor selectively suspends the write signal based on positioning of the write head relative to the ~~storage medium~~ magnetic tape.

14. (currently amended) The system of claim 13 wherein the processor selectively suspends the write signal based solely on positioning of the write head relative to the ~~storage medium~~ magnetic tape.

15. (currently amended) The system of claim 13 wherein positioning of the write head relative to the ~~storage medium~~ magnetic tape is detected based on a comparison of data written to, and read from, the ~~storage medium~~ magnetic tape.

16. (currently amended) The system of claim 13 wherein positioning of the write head relative to the ~~storage medium~~ magnetic tape is detected based on write head tracking information stored on the ~~storage medium~~ magnetic tape.

17. (currently amended) The system of claim 11 wherein the ~~storage medium~~ magnetic tape comprises a ~~magnetic tape having~~ data having read/write head ~~positioning~~ tracking information and a plurality of generally parallel data channels.

18. (canceled)

19. (canceled)

20. (canceled)

21. (currently amended) A computer readable storage medium having stored data representing instructions executable by a processor to control a ~~data storage~~ magnetic tape device that positions a write head over a moving ~~storage medium~~ magnetic tape and provides a write current to the write head, the computer readable storage medium comprising:

instructions for detecting a writing error, wherein the writing error is indicated by at least one of a data read back check and write head tracking information;

instructions for measuring span of the writing error;

instructions for suspending the write current in response to the writing error while allowing the moving ~~storage medium~~ magnetic tape to continue moving when the writing error is indicated by the write head tracking information;

instructions for disregarding the writing error when the writing error is indicated by the data read back check and the span of the writing error is less than a first

threshold wherein the first threshold is based on the span of the writing error and capability of error correction information to recover mis-recorded data;

instructions for repositioning data that would have been stored during the span of the writing error suspending of the write current when the span of the writing error is greater than the first threshold;

instructions for repositioning the magnetic tape when the span of the writing error is greater than a second threshold wherein the second threshold is greater than the first threshold and is based on the span of the writing error and capacity of the magnetic tape; and

instructions for supplying [[a]] the write current to ~~store~~ write the repositioned data on the moving ~~storage-medium~~ magnetic tape when the span of the writing error is greater than at least one of the first threshold and the second threshold [[:]]

~~instructions for re-writing mis-recorded data if the span is less than a first threshold wherein the first threshold is based upon the span and upon error correction information; and~~

~~instructions for repositioning and re-writing the mis-recorded data if the span of the writing error is between the first threshold and a second threshold.~~

22. (currently amended) The computer readable storage medium of claim 21 wherein error correction information is encoded in the data on the moving ~~storage-medium~~ magnetic tape and wherein the instructions for detecting a writing error comprise:

instructions for comparing data written to the moving ~~storage-medium~~ magnetic tape to data read from the moving ~~storage-medium~~ magnetic tape to detect errors in the data;  
and

instructions for indicating a writing error if errors in the data exceed a corresponding read back error threshold.

23. (currently amended) The computer readable storage medium of claim 21 wherein error detection and correction information is encoded in the data on the moving ~~storage-medium~~ magnetic tape and wherein the instructions for detecting a writing error comprise:

instructions for reading the error detection information to detect errors in the data; and

instructions for indicating a writing error if errors in the data can not be corrected by the encoded error correction information.

24. (currently amended) The computer readable storage medium of claim 21 wherein the instructions for detecting a writing error comprise:

instructions for indicating a writing error based on positioning of the write head relative to the moving ~~storage medium~~ magnetic tape.

25. (currently amended) The computer readable storage medium of claim 24 wherein the instructions for detecting a writing error comprise:

instructions for indicating a writing error based solely on positioning of the write head relative to the ~~storage medium~~ magnetic tape.

26. (currently amended) The computer readable storage medium of claim 21 wherein the moving ~~storage medium~~ magnetic tape includes data having write head ~~positioning~~ tracking information and wherein the instructions for detecting a writing error comprise:

instructions for indicating a writing error based on the write head ~~positioning~~ tracking information.

27. (canceled)

28. (original) The computer readable storage medium of claim 21 further comprising:

instructions for formatting data for writing by grouping data into sub-blocks, adding sub-block sequencing information, write pass information, and error detection information to each sub-block of the data.

29. (currently amended) The computer readable storage medium of claim 21 further comprising instructions for distinguishing current data from previously written data stored on the moving ~~storage medium~~ magnetic tape.

30. (canceled)

31. (canceled)